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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/10/2001

Joar Vaage

1781

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24264

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02/21/2006

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EXAMINER

CHANG, AUDREY Y

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/936,390	VAAGE, JOAR	
	Examiner	Art Unit	
	Audrey Y. Chang	2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-41 is/are pending in the application.
- 4a) Of the above claim(s) 14,20-24 and 29-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13,15-19 and 25-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on **December 8, 2005** has been entered.
2. No amendment to the claims has been filed by the applicant with the response.
3. **Claims 14, 20-24 and 29-41 are withdrawn** from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **by original presentation**, (please referred to the election and restriction requirement set forth in the previous Office Action).
4. Claims 13, 15-18, 19 and 25-28 remain pending in this application.

Response to Amendment

5. The **declaration** under 37 CFR 1.132 filed **December 8, 2005** is insufficient to overcome the rejection of claims 13, 15-18, 19 and 25-28 based upon **Park (PN. 6,522,351) and Lipton et al (PN. 5,416,510)** as set forth in the last Office action because: applicant's arguments are mainly based on the features not recited in the claims, (please read the details explanation in the section of Response to Arguments).

Claim Objections

6. **Claims 13, 15-19 and 25-28 are objected to because of the following informalities:**

(1) It is not clear if it is the “picture” or the “picture signal” being projected by the projector, since claims 13 and 25 specifically recite that the “picture” is received and transmitted to the projector not the “picture signal”. It is not clear if the applicant means to have these two terms means two different things or not. Clarifications are required. The terms have to be consistent through out all the independent claims as well as dependent claims to avoid confusions.

(2). It is not clear if the left and right picture signals are cyclically input and transferred to the first and second projector respectively yet the first and second projection would be able to “be associated” with the right and left picture signals at the same time, as recited in claim 15. It appears to be contradiction here or there is critical information missing for achieve such.

Appropriate correction is required.

In response to applicant’s arguments concerning the statutory base for the clarification requirements, the applicant is respectfully referred to MPEP for such requirement. The applicant is respectfully noted that the “picture signals” cannot be projected by the projector, as stated in the claims, rather is the pictures being projected.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 13, and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Park (PN. 6,522,351) in view of the patent issued to Lipton et al (PN. 5,416,510).**

Park teaches a method and device for stereo projection of pictures of an object (10, Figures 2-4), wherein picture signals of the object that are intended for left eye and for right eye respectively are

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formed and received by left and right video cameras and left and right receiving sections (100, and 110). Park teaches that the left eye and right picture signals from the cameras are converted to left eye and right eye television image signals, (such as 402 and 404 in Figure 5), and the left and right receiving sections *converts* the left and right television signals to left eye and right eye image signals, which means some sort of “decoding” function is performed. It is also implicitly true that certain picture storages for the left and right eye image signals are needed for storing the left eye and right eye image signals such that *repeated scanning* or periodical scanning the storages with the left and right eye image signals is performed, (double scanning sections 122 and 124, or 212 and 214 or 312 and 314, in Figures 2-4), to generate the double scanned image signals which are consequently transmitted to the projector for projection.

This reference has met all the limitations of the claims with the exception that it does not teach explicitly that the incoming left and right eye pictures are formed in cyclically format with odd and even number pictures and with odd numbered pictures being transmitted to a first projector and the even numbered pictures being transmitted to a second projector. However Park does teach explicitly that the left eye picture and the right eye pictures are *separately* stored, decoded and scanned, whether to make them coming in cyclical form or not does not differentiate the method of projection of the left and right eye pictures to produce stereoscopic image of the object. One skilled in the art certainly can make the cameras (102 and 104) take the left eye and right eye pictures of the object in *time sequential manner* in order for the odd numbers of the pictures representing left eye picture and even number of the pictures representing right eye picture for the benefit of reducing the number of the incoming pictures needed for achieving the projection. Park teaches that the left and right images are alternatively transmitted (130, Figure 2) to the projection device, but it does not teach explicitly in this embodiment to use two projectors one for projecting the left eye picture image signals one for projecting right eye picture image signals. *Park however teaches it is known in the art to use two projectors for such stereo picture projection,*

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(please see Figure 1). **Lipton et al** in the same field of endeavor teaches explicitly that left eye and right eye pictures of an object obtained by a pair of cameras (120 and 121, Figure 1C) can be transmitted to **right and left projectors** (404 and 403, Figure 4) respectively via recorder and display controller to make the right pictures being projected by the right projector and the left pictures being projected by the left projector for the benefit of using a pair of projectors that allows simultaneous projections of the left and right eye pictures without time delay.

With regard to claim 17, the left double scanning section and the right double scanning section taught by Park serve as the first and second picture generator. With regard to claim 18, the *double* scanning section allows scanning of the image signals at a rate *different* from the incoming rate of the incoming picture signal.

9. Claims 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Lipton.

Lipton et al teaches a *device for stereo projection of pictures* having a pair of **cameras** (120 and 121, Figure 1C) for *producing left eye picture* intended for left eye and *right eye picture* intended for right eye and the device further comprises recorder and display *controller* (401 and 402, Figure 4) for *selecting* the left eye picture signal and directs it via a *first optical path* to a *left projector* and for selecting the right eye picture signal and directs it via a *second optical path* to a *right projector* for stereoscopic projection. This implies that display controller must include certain page selector for selecting the left eye and right eye picture signals from the recorder, for otherwise the left eye picture and right eye picture cannot be projected by the left and right projector respectively.

This reference has met all the limitations of the claims. It however does not teach explicitly that the page selector has a control unit adapted to sense the incoming left and right picture signals. But such control unit is either implicitly included for making the right eye and left eye picture signal *properly*

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being selected and directed to the respective projectors respectively or it is an obvious modification to one skilled in the art to *ensure* the selection and the transmission of the picture signals to the proper projectors be proper for achieving the stereoscopic image display.

This reference also does not teach explicitly that the left eye and right eye picture signals are cyclically presented with odd numbered image signals and even numbered image signals being transmitted to the first and second projectors respectively. However Lipton does teach explicitly that the left eye picture signals and the right eye picture signals are transmitted to left and right projectors respectively whether to have them coming in alternative or cyclic format or not does not differentiate the projection.

With regard to claim 26, the left and right eye picture signals are projected at the same time.

With regard to claim 28, it is implicitly true or obvious modification to one skilled in the art to include certain decoders in the display controller so that the multiplexed left eye and right eye picture signals be demultiplexed, selected and properly formatted so that picture signals are transmitted and properly displayed on the projectors.

10. Claims 13, 15-18, 19 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over the patent issued to Park (PN. 4,954,890).

Park teaches a method for three dimensional images through high luminance liquid crystal display projector, wherein the method includes a signal source (2) for *alternatively and cyclically* emitting image signals intended for left eye and intended for right eye, (please see column 4, lines 12-15), a *left and right signal identifier* (32) serves as the *page selector* for receiving and selectively transferring the left image signal to the first image projector and right image signal to the second image projector (33 and 34, Figure 1), via two different optical paths. The right and left image systems (33 and 34) or the first and second projection *each* comprises CCD, A/D converter and LCD driving circuit, which either implicitly includes decoding and storing the left and right image signals. Although this reference does not teach

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explicitly of periodically scanning the left and right storage for projecting the left and right image respectively, such feature is either inherently included for scanning technique is used in LCD projector or it is an obvious modification to one skilled in the art to specifically use a scanning method to obtain the image stored in the storage to project it as desired for the scanning method is standard technique used in the display device art to obtain the stored image information for efficiently and periodically obtaining the image information.

With regard to claim 15, the feature recited in claim 15 appears to be contradicting to the based claim, for the reasons stated above, it can only be examined in the broadest interpretation. Park teaches that the while the left image is projected to the screen the previously presented right image is projected to the screen again which means the left and right image signals are “associated” with the left and right image systems or projections at the same time.

With regard to claims 16 and 26-27, Park teaches that the left image system (33) only projects the left image, alternatively presented to it, and the right image system only projects the right image, alternatively presented to it.

With regard to claims 17 and 18, Park teaches that a first liquid crystal panel (11) and a second liquid crystal panel (12) are associated with the first projector and second projector respectively as the “first and second picture generator”. Although this reference does not teach explicitly about the scanning process however it is known in the art to that scanning method could be used in the liquid crystal display panel as the means to obtain the image information, such modification would then have been obvious to one skilled in the art to make use of standard scanning method in the LCD panel as means to retrieve the image information for the benefit of using standard technology to achieve the desired picture generation purpose. The scanning rate is based on the design of the liquid crystal display which could be different from the incoming rate of the image signals.

With regard to claim 28, since the claim fails to identify what is considered to be the “decoder” it would be interpreted with the broadest sense. The A/D converters (24 and 27) can be viewed as the first and second decoders placed between the page selector (32) and the first and second projector.

Response to Arguments

11. Applicant's arguments filed on December 8, 2005 have been fully considered but they are not persuasive. The declaration filed on December 8, 2005 has been fully considered and it is not sufficient to overcome the rejection based on the references Park (PN. 6, 522, 351) and Lipton et al (PN. 5,416,510). Since applicant's arguments are mainly stated in the declaration, they are addressed as follows.

Firstly, the applicant is respectfully noted that the features not *explicitly stated* in the claims cannot be relied upon to overcome the rejections. For this matters, applicant's arguments concerning the picture signals disclosed by the Park and Lipton reference being different from the instant application, cannot overcome the rejections, since applicant fails to claim what **exactly** are the differences of the picture signals of the instant application as referred to the cited references. At this juncture, the claims only state “*incoming picture signal cyclically between a picture intended for the right eye and a picture intended fro the left eye*”. Both Park and Lipton teach the picture signal has picture intended for the right eye and picture intended for the left eye. In fact the picture signals (412 and 414) of Park are picture signals intended for left eye and for right eye respectfully. Although Park teaches one step to multiplex the image signals to make them interlaced image signals, Park **does** teach it is also possible to have the picture signals *directly* transferred to left and right projector respectively for projection, as **explicitly shown in Figure 1**. Furthermore, Lipton et al teaches to demultiplexed the interlaced image signal to make the left eye picture signal to be transferred to the left projector and the right eye picture signal to be transferred to the right projector, for projection respectively. This means Park and Lipton et al in

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combination reads on the method stated in the claims of the instant application, namely having incoming picture signal intended for left eye be transferred to left projector and incoming picture signal intended for right eye be transferred to right projector. The claims in the instant application does not exclude the multiplexing and demultiplexing process and does not exclude any particular format of the image signals.

Secondly, the applicant is respectfully noted that the claims really fail to state what exactly are these “a picture intended for the right eye and a picture intended fro the left eye”. Since applicant as in responding to the Park reference, states that the “whereas in our invention the incoming picture signal contains **both** the left and right eye picture signals in one path”, yet as referred to Lipton et al reference the applicant seems to make difference between the instant application and the “multiplexed image with the left eye picture and right eye picture are stored as adjacent images within one picture frame (side-by-side)”. What then is this **single** image signal having **both** the right eye picture signal and left eye picture signal yet not in side-by-side fashion of a single frame and not as two separated image signals as disclosed in Park. The applicant is respectfully noted, the features concerning multiplexed or not multiplexed, and side-by-side in a frame cannot be relied upon to overcome the rejection since such features and limitations are not explicitly stated in the claims.

Thirdly, as stated by the applicant in the declaration, in order for stereoscopic image projection, synchronization between the left picture signal and right picture signal is crucial, yet no such critical limitation is included to make the stereoscopic image display possible. This makes the “alternating cyclically between a picture intended for right eye and a picture intended for left eye” not critical since it appears that the applicant is not intended to have any sort of timing synchronization to be presented by the alternative inputting the picture signals. Since the claims fail provide any sort of time synchronization between the picture signals it can be viewed as one having two parallel projector systems one project one picture at a time alternatively. There is not critical connection between the two at this juncture to make it different in novelty as compare to arbitrarily use two projectors. For that matters, with regard to **Izawa et**

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al reference (PN. 5,726,703), if one can use one set of projector to achieve the stereoscopic image projection why would one need to use two, for doubling the costs and everything? Furthermore, both Park and Lipton et al references show that whether to input the picture signals alternative cyclically or not does not really matters as long as the time synchronization between the *projections* of the left and right pictures is there, then stereoscopic image can be viewed.

Fourthly, applicant's arguments concerning the cited Lipton et al reference teaches the input image signal has both right eye and left eye signal side-by-side in a field which therefore the separation of the image signal requires a decoupling and demultiplexing rather than a mere page selection process, are not found to be persuasive since the claims fail to explicitly what exactly is a mere page selection process, that is different from the decoupling and demultiplexing process. Lipton et al teaches explicitly that after the decoupling and demultiplexing process separated left and right picture signals are generated and ready to be transferred to left and right projectors respectively for projection, selection certainly is included for making the proper picture signal to the proper projector.

Contact Information

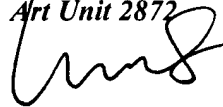
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Audrey Y. Chang whose telephone number is 571-272-2309. The examiner can normally be reached on Monday-Friday (8:00-4:30), alternative Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Audrey Y. Chang, Ph.D.
Primary Examiner
Art Unit 2872

A handwritten signature in black ink, appearing to read 'Audrey Y. Chang', is written over the printed name and title.

A. Chang, Ph.D.